

ABSTRACT

Disclosed is an input/output coupling structure for a dielectric waveguide resonator to be mounted on a printed circuit board, which comprises; a region defined in the printed circuit board and surrounded by a first conductive film formed on the front surface of the printed circuit board and connected to a microstrip line on the printed circuit board, a second conductive film formed on the back surface of the printed circuit board, and a conductive wall connecting the respective peripheries of the first and second conductive films; a first slot formed in the front surface of the region; and a second slot formed in a surface of the dielectric waveguide resonator which is disposed to be opposed to the region of the printed circuit board. The first and second slots are adapted to be disposed in opposed relation to one another. The coupling structure can achieve the connection between a dielectric waveguide resonator and a microstrip line without forming any input/output electrode on the resonator, to facilitate the application of the dielectric waveguide resonator to an electronic circuit even if it is intended to be used in millimetric-wave band.